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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,071

05/02/2006

Willem L. Ijzerman

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

HEYMAN, JOHN S

ART UNIT

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2871

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,071	Applicant(s) IJZERMAN ET AL.	
	Examiner John Heyman	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-25 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6, 8 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, Claims 6 and 8 are multiple dependent claims that fail to refer to other claims in the alternative only. See Rule 1.75c. From the Preliminary Amendment of 05/02/2006, it appears that these claims were not meant to be multiple dependent claims. Correction amendments are required. Claim 25 is ambiguous in that it appears to be referring to more than one claim, but only one referred claim is present. Amendment is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moseley et al. (Moseley – US 6,437,915) taken with Margerum et al. (Margerum – US 5,099,343). Looking at Fig. 4 of Moseley, and comparing it with Claim 1, a light source 3 provides light for illuminating a display panel 1 after passing through a parallax barrier 4. Not shown by Moseley, is the waveguide having a first face for receiving light and an exit face therefor in which the light leaves after it is scattered by a plurality of portions of diffusing material located within the waveguide. Fig. 3 of Margerum shows these features wherein a waveguide 12 for use with a display panel (col. 1, line 50) comprises a first face at top surface of 50, receiving light from source 34, and an exit face at right edge of plate 30 after being diffused by a plurality of portions 22-26 of diffusing material within the waveguide 12. It would have been obvious to substitute the waveguide structure including the plurality of portions 22-26 in Margerum for the light source 3 and parallax barrier 4 in Moseley for the reason given in Margerum, namely, to provide for high contrast in liquid crystal display panels (col. 1, line 9).

6. Regarding Claims 2-9, note in Fig. 3 of Margerum in which a pattern of light lines is shown leaving the exit face as recited in Claim 2; that at least one of the portions (22) can be selectively switched between light transmissive and light diffusive states (col. 5, line 1) to meet Claim 3; that Margerum discloses an electrode layer 18, for example in col. 3, line 22 that obviously under 35 USC 103 is well known to include a “plurality of electrodes” to perform the switching function therein as recited in Claim 4; that light passing through first regions 24 and 26 of Margerum produces a uniform illumination,

while light passing through a second region 22 produces a pattern (Fig. 3) to meet Claim 5; that a plurality of column electrodes as recited in Claim 6 and a plurality of row electrodes as recited in Claim 7, the two dimensional array of electrodes of Claim 8, and the active matrix of Claim 9 are all deemed to be obvious well known parts of the active matrix display disclosure in Margerum (col. 7, line 32).

7. Regarding Claims 10-12, note reflective surface 68 in Fig. 2 of Margerum to meet this limitation in Claim 10; that a liquid crystal material is disclosed by Margerum in col. 3, line 68 to meet Claim 11; that the liquid crystal material may be a “gel” as recited in Claim 12 since this amounts to an obvious design expedient under 35 USC 103. That is, as recognized in the *KSR International Co. v. Teleflex Inc.* 82 USPQ2d 1385 (2007), if different options are available to the skilled worker, and such options produce predictable results with anticipated success, it would not be patentable under 35 USC 103, but routine skill. Thus, using a gel liquid crystal material in Claim 12, instead of a liquid crystal material *per se* as recited in Claim 11 and disclosed by Margerum involves only routine skill without any unobvious result being produced, and therefore, not patentable.

8. Regarding Claims 13 and 15-17, as noted in the rejection of Claim 1 above, Margerum discloses a display panel in col. 1, line 50, and an illumination system in Fig. 3 thereof arranged to illuminate the display panel which comprises a light source 34 and a waveguide 12 to thus meet Claim 13; and that col. 1, line 55 of Margerum discloses a communication type device, computer type device and audio/visual type device within the meaning of 35 USC 103 to meet Claims 15-17. That is, as disclosed in col. 1, line

53 of Margerum, “applications of liquid crystal devices cover a wide range from small consumer timepieces to relatively large dashboard and heads-up displays...” which, under 35 USC 103, Official Notice is taken to include, e.g., mobile phones (communication device) and GPS units (computer and audio/visual device) at the time this application was filed, and thus render obvious these claimed recitations.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Margerum, cited above. Looking at Claim 18 and comparing it with Fig. 3 of Margerum, note display panel (col. 1, line 50), backlighting using a light source 34, and a waveguide 12 comprising a layer of diffusive material 16 in which a power source 28 sets the optical properties of at least one portion 22 of layer 16 to meet Claim 18; that power source 28 performs the step of setting the optical properties on portion 22 to meet Claim 19; and that the segments may be selectively activated (col. 5, line 1) to meet Claim 20.

Claim Rejections - 35 USC § 103

11. Claims 18 is further rejected, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moseley, cited above in view of Margerum, cited above. Just

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as in the rejection of Claims 1-13 above, Fig. 4 of Moseley shows the combination of a backlight source 3 with a parallax barrier 4 and a switchable diffuser 11 for producing a 3D image as recited in Claim 21, a 2D image as recited in Claim 22 and mode switching between the two for producing either as recited in Claim 23 (col. 3, lines 48-53). Not shown by Moseley is the waveguide with a backlight source and a diffusive material layer in which the backlighting provides setting optical properties of at least one portion thereof as recited in independent Claim 18. Margerum shows these features in Fig. 3 therein in which a backlighting structure comprising a waveguide 12 with a backlight source 34 and a diffusive material layer 16 in which the backlighting structure provides setting the optical properties of at least one portion 22 therein to meet Claim 18. It would have been obvious to substitute the backlighting structure of Margerum for the backlight and parallax barrier of Moseley for the reason given in Margerum, namely, to provide for high contrast liquid crystal display panels (col. 1, line 9) to thus render obvious these claims.

12. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moseley and Margerum as applied to claims 18 and 21 above, and further in view of Tomono (US 2003/0067563). Not shown by either Moseley or Margerum is the concept of providing; illuminating a first area of a display panel with a 2D image; and a second area of the display panel with a 3D image as recited in this claim. Tomono discloses this feature in paragraph 9 therein. It would have been obvious under 35 USC 103 to apply the teaching of Tomono in the Moseley/Margerum combination for the reason given in

Tomono, namely, to greatly improved simulation systems such as in medical science (Abstract in Tomono) for which Moseley is concerned in (col. 1, line 19).

Allowable Subject Matter

13. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Claim 25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art uncovered to date shows, *inter alia*, the concept of an arrangement for determining the position of a viewer, switching one or more of a plurality of portions according to the detected position of the viewer and adjusting an image according to the detected or determined position of the viewer. As such, these claims upon appropriate amendments mentioned above would be allowable as presently advised.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Date et al (US 6,618,104) shows, like Margerum, a light waveguide in which a liquid crystal material is provided as a diffusing medium to control the scattering of the light therethrough.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Heyman whose telephone number is 571 272-5730. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571- 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. H./
Examiner, Art Unit 2871

/Andrew Schechter/
Primary Examiner, Art Unit 2871

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